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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,320	10/07/2005	Gerold Becker	5015.1018	2732

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EXAMINER

VERDIER, CHRISTOPHER M

ART UNIT PAPER NUMBER

3745

DATE MAILED: 08/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/552,320	<b>Applicant(s)</b> BECKER ET AL.	
	<b>Examiner</b> Christopher Verdier	<b>Art Unit</b> 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10-7-05</u> . | 6) <input type="checkbox"/> Other: ____.  |

Receipt and entry of Applicant's Preliminary Amendment dated October 7, 2005 is acknowledged.

### ***Drawings***

The drawings are objected to because figures 1 and 3-8 are of poor quality and are blurred/blackened. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: Appropriate correction is required.

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In paragraph 9, line 2, the reference to claim 1 should be deleted.

In paragraph 16, line 2, the reference to claims 2-32 should be deleted.

In paragraph 17, line 2, the reference to claim 33 should be deleted.

In paragraph 38, second to last line, “[sic]” should be deleted. Additionally, in the second and third to last lines, “via rotor star 4” is unclear as to how the blades are connected to rotor star 4 via rotor star 4.

In paragraph 39, third to last line, “H1” (second occurrence) should be changed to -- H2 -

-.

In paragraph 39, third to last line, “[sic]” should be deleted.

In paragraph 43, line 5, “join” should be changed to -- joint --.

In paragraph 45, line 9, “H21b” should be changed to -- H1b --.

In paragraph 51, fourth to last line, “in” (second occurrence) should be deleted.

In paragraph 57, line 5, “H1” (second occurrence) should be changed to -- H2 --.

In paragraph 57, line 5, “[sic]” should be deleted.

In paragraph 73, line 2, “join” should be changed to -- joint --.

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: Appropriate correction is required.

In claim 1, line 2, “blade-neck” should be changed to -- blade neck --.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, lines 6 and 7, “between which” is indefinite in that it is unclear which element this refers to (for example, the auxiliary flapping hinges, or the rotor blade and the radius, or the rotor blades if there are plural rotor blades).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1, as far as it is definite and understood, is rejected under 35 U.S.C. 102(b) as being anticipated by Baskin 3,874,815 (figures 4-6). Note the rotor, comprising rotor blades 36A, 36B connectable to a rotor head 56, which rotor blade possesses a blade neck 10A, 10B having a virtual flapping hinge in the form of a flexurally soft, flexurally elastic blade-neck portion, there being provided, in a blade connector region of the blade neck, two auxiliary flapping hinges 40, 42 spaced apart from one another in the radial longitudinal direction of the rotor blade with reference to a rotor radius, between which the virtual flapping hinge is

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substantially disposed and between which the blade neck is deformable in flexurally elastic and curved fashion in the context of a flapwise motion.

Claim 1, as far as it is definite and understood, is also rejected under 35 U.S.C. 102(b) as being anticipated by Rybicki 4,093,400. Note the rotor 10, comprising rotor blades 14 connectable to a rotor head 20, which rotor blade possesses a blade neck 16, 18 having a virtual flapping hinge in the form of a flexurally soft, flexurally elastic blade-neck portion, there being provided, in a blade connector region of the blade neck, two auxiliary flapping hinges 31, 31 spaced apart from one another in the radial longitudinal direction of the rotor blade with reference to a rotor radius, between which the virtual flapping hinge is substantially disposed and between which the blade neck is deformable in flexurally elastic and curved fashion in the context of a flapwise motion.

#### ***Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yao and Head are cited to show rotor blades with blade necks having a virtual flapping hinge in the form of a flexurally soft, flexurally elastic blade-neck portion, with two auxiliary flapping hinges spaced apart from one another in the radial longitudinal direction of the rotor blade with reference to a rotor radius, between which the virtual flapping hinge is located. These references could also have been applied as they anticipate claim 1 under 35 U.S.C. 102, but are not applied at this time in order to avoid multiple rejections.

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Derschmidt is cited to show a rotor blade with dual spar sections mounted to a rotor head in a triangular pattern.

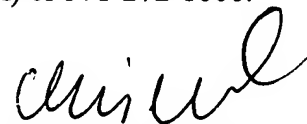
Watson is cited to show a rotor blade with dual spar sections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C.V.  
August 15, 2006

  
Christopher Verdier  
Primary Examiner  
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